



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,776	06/30/2003	Thomas V. Harris	T-6152	1883
34014	7590	03/30/2005	EXAMINER	
CHEVRON TEXACO CORPORATION P.O. BOX 6006 SAN RAMON, CA 94583-0806			NGUYEN, TAM M	
			ART UNIT	PAPER NUMBER
			1764	

DATE MAILED: 03/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/611,776

Applicant(s)

HARRIS ET AL.

Examiner

Tam M. Nguyen

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,7-11 and 13-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,7-11 and 13-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

RE

DETAILED ACTION

Response to Amendment

The rejection of claims 1 and 29-31 under 35 USC § 102(b) anticipated by Miller et al. (6,518,473) is withdrawn by the examiner in view of the amendment filed on January 12, 2005.

Since a new non-final rejection follows, applicant's arguments will not be addressed.

Claim Objections

Claim 2 is objected to because of the expression "the Fischer-Tropsch derived condensate". To make the claim clearer, the examiner suggests that applicants should amend claim 2 or claim 1 so that the expression "the Fischer-Tropsch derived condensate" in claim 2 refers to "the Fischer-Tropsch condensate" in step (a) of claim 1 not "the Fischer-Tropsch derived condensate" in step (b) of claim 1. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

Art Unit: 1764

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 3, 4, 7-11 and 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al. (6,518,473) in view of either Vora et al. (5,672,795) or Gorawara et al. (5,271,835).

Miller discloses a dimerization process (oligomerization) by feeding an olefinic feed, which derives from Fischer-Tropsch synthesis, into an adsorption zone to remove oxygenates (e.g., alcohol). The treated feed is then contacted with an ionic liquid catalyst in a dimerization zone to produce a product having a higher average molecular weight and increased branching as compared to the olefinic feed. The product can be used as lubricating base oil and diesel. Miller discloses that the olefinic feed is dehydrated to produce a pure olefinic feed. Miller also discloses a step of hydrogenation of diolefins. (See abstract; col. 1, lines 64-67; col. 3, line 64 through col. 4, line 23; col. 5, lines 43-58; col. 9, lines 11-20, 40-41; col. 10, line 33 through col. 12, line 15)

Miller does not specifically disclose an amount of oxygenate in the olefinic feed.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process Miller by using an olefinic feed comprising not

Art Unit: 1764

more than about 200 ppmw or 100 ppmw of elemental oxygen as claimed because one of skill in the art would use an olefinic feed comprising any amount of oxygen including the claimed amount and it would be expected that the results would be the same or similar when using an olefinic feed comprises either 210 ppmw or 200 ppmw of oxygenate in the process of Miller.

Miller does not disclose that the adsorption zone comprises zeolitic molecular sieve such as 13X zeolite.

Both Vora and Gorawara disclose a process for separating oxygenates from a hydrocarbon feed by using X-zeolite. Since the zeolite of both Vora and Gorawara is the same as the claimed zeolite, the zeolite of Vora and Gorawara would have the characteristics as claimed. (See Vora; col. 7, line 21-31; Gorawara, col. 9, line 37-42).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Miller by using the zeolite of either Vora or Gorawara because such zeolite is effective to remove oxygenates from a hydrocarbon feed. Consequently, the modified process of Miller would produce an olefinic product comprising substantially no oxygenates as claimed because of the similarities between the claimed process and the modified process of Miller in term of feedstock and adsorbent. Gorawara also discloses that the adsorbent is capable of producing a product containing less than 5 ppm of oxygenates. See Gorawara, col. 9, line 37-42.

Claims 19-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over references as applied to claims 1, 3, 4, 7-11 and 13-18 above, and further in view of Hope et al. (6,395,948)

Miller does not specifically disclose the composition of the ionic liquid catalyst.

Art Unit: 1764

Hope discloses an oligomerization process by using an ionic liquid catalyst comprising aluminum trichloride (a) and trimethylamine hydrochloride (b) wherein the ratio of (a) to (b) ranges from 1:1 to 2:1. (See col. 2, lines 8-31)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Miller by using the ionic liquid catalyst of Hope because the catalyst of Hope is known to be effective in an oligomerization process.

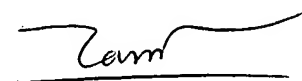
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tam M. Nguyen whose telephone number is (571) 272-1452. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tam M. Nguyen
Examiner
Art Unit 1764



TN